

Product Brief

Intel® Embedded Graphic Drivers

Embedded Computing



Intel® Embedded Graphics Drivers for Embedded Intel® Architecture-based Chipsets

Product Overview

Intel® Embedded Graphics Drivers specifically target the needs of embedded platform developers, offering an alternative to drivers designed for the desktop and mobile market segments. Developed from the ground up as a graphics driver set, they support the following chipsets:

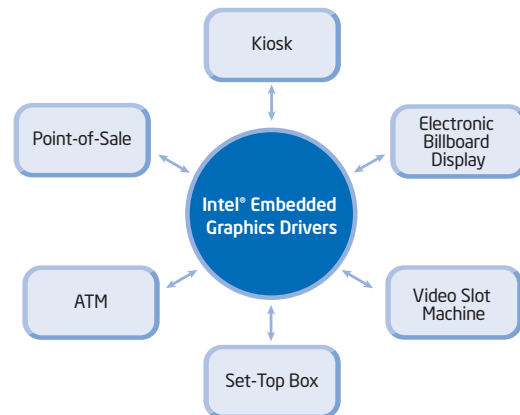
- Intel® Q965 Express chipset
- Mobile Intel® 945GM Express chipset
- Intel® 945G Express chipset
- Mobile Intel® 915GM Express chipset
- Intel® 915GV Express chipset
- Intel® 855GME chipset
- Intel® 852GME chipset
- Intel® 852GM chipset
- Intel® 845GV chipset

Intel Embedded Graphics Drivers include video BIOS, support a variety of operating systems, and have been validated by Intel on specific Linux* and Microsoft Windows* operating systems for embedded platforms.

A flexible architecture and customized Intel driver support help provide OEMs with faster time-to-market by allowing them to configure display and platform specifics in-house. Supported by a dedicated embedded graphics team, Intel Embedded Graphics Drivers offer a consistent feature set across hardware and operating systems, promoting familiarity and portability to future integrated graphics products.

The Intel Embedded Graphics Drivers support a wide range of applications including, but not limited to:

- Point-of-Sale (POS) systems running desktop Windows* XP, driving dual independent LVDS flat-panel displays
- Kiosk systems running Windows* XP Embedded, driving dual independent displays, such as a single CRT display and a single DVI flat-panel display
- ATM systems running Windows XP Embedded, driving a single LVDS flat-panel display



- Set-top box running Red Hat Linux, driving a single HDTV display
- Advertisement systems running Red Hat Linux, driving a single 16:9 wide-screen VGA plasma display
- Video slot machines running Windows CE 5.0*, driving dual independent LVDS flat-panel displays

Intel Advantage

The Intel Embedded Graphics Drivers are robust drivers designed specifically for the embedded market segment, rather than for the mainstream desktop or mobile markets. These drivers allow embedded OEMs and system integrators to customize their configurations while maintaining a very competitive performance profile. Starting with version 3.4, this scalable architecture has been extended to the video BIOS, thereby allowing OEMs and system integrators more flexibility than ever before.

Intel's universal software architecture supports similar functionality across all supported Intel® platforms and operating systems, thereby reducing customer learning time and time-to-market.

For further product information, please visit intel.com/go/iegd

Features	Benefits
Consistent feature set	Easy portability across Intel's integrated-graphics chipset product families and across operating systems; intended target chipsets will have same capabilities regardless if originally designated as desktop or mobile
Serial DVO device support	Universal serial DVO port driver for use with the Intel® Q965 Express, Mobile Intel® 945GM Express, Intel® 945G Express, Mobile Intel® 915GM Express, and Intel® 915GV Express chipsets
DVO device support	A wide variety of DVO devices (TMDS, LVDS, or TV-Out) can be used in combinations supported by hardware
DVO device extensibility	Software development kit allows addition of customized DVO devices (those not commonly supported by default)
Configurable display support	Exposes method for adding new or custom display modes
Control APIs	Non-standard features exposed, such as display switching and toggling, and DVO device control
Boot configurability	Driver and video BIOS may be customized specifically for OEM display and platform configurations
2D acceleration	Improved performance of applications which take advantage of OS acceleration APIs, including X11 XAA interface or Microsoft DirectDraw* interface
Overlay support	Improved video playback performance using the X11 Xv interface or Microsoft DirectDraw interface
Multiple-display support	Separate data may be sent to separate displays where supported by hardware (i.e., Intel® 855GME chipset); otherwise, supports same data sent to separate displays
ACPI on Microsoft Windows*	Advanced configuration and power interface for all supported embedded Intel® architecture-based chipsets
Microsoft Direct3D* support	Improved performance for 3D applications utilizing Microsoft DirectX* APIs for Windows operating systems
OpenGL for Linux	OpenGL on supported 2.6 kernel Linux distributions for advanced 3D capability; OpenGL 1.4 supported on the Mobile Intel 915GM Express, and Intel 915GV Express chipsets; OpenGL 1.3 supported on the Intel® 855GME, Intel® 852GME, Intel® 852GM, and Intel® 845GV chipsets
Upscaling	Lower-resolution modes can be displayed full screen with configurations that support upscaling (with Chronitel CH7017* and CH7308*)

Support for Embedded Intel® Architecture-based Chipsets

Chipsets	<ul style="list-style-type: none"> Intel® Q965 Express chipset Mobile Intel® 945GM Express chipset Intel® 945G Express chipset Mobile Intel® 915GM Express chipset Intel® 915GV Express chipset Intel® 855GME chipset Intel® 852GME chipset Intel® 852GM chipset Intel® 845GV chipset
DVO and sDVO devices	<ul style="list-style-type: none"> Internal LVDS on capable Intel® architecture chipsets Chronitel CH7307, and CH7308* (sDVO devices) Chronitel CH7009/CH7010, CH7017, CH7301, and CH7305 Focus FS453/454* National Semiconductor NS2501 and NS387R* Silicon Image Sil164* (DVO device), Sil1362, and Sil1364 (sDVO devices) THine Th164* Texas Instruments TFP410* Dual DVO support for CH7017 with TV-out and LVDS with one DAB Dual digital transmitter support with sDVO
OSs and APIs	<ul style="list-style-type: none"> SUSE Linux Enterprise Server 10* Red Hat 9 Linux* Fedora* Core 2 (Kernel 2.6 and X.org) Microsoft Windows* 2000 (SP4), Windows* XP (SP2), Windows* XP Embedded (SP1) Microsoft Windows Embedded for Point of Service* Microsoft Windows* CE (versions 4.2 and 5.0) DOS support (IBM PC DOS* 2000, Microsoft DOS* 6.22)

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